REMARKS

Claims 5-12, and 14-18 are pending. Withdrawn Claims 1-4 and 13 have been canceled without prejudice or disclaimer. Claims 5, 10, 12, and 14-16 have been amended. Thus, all rejections are moot by amendment to the claim itself, or its independent claim.

Applicant respectfully requests entry of this amendment, as it places the claims in condition for allowance and reduces the issues for appeal. For example, Claims 5, 12, and 15 were objected to. To advance prosecution, these claims have each been amended to conform with the Examiner's requests. Accordingly, these objections are no longer relevant, reducing the number of issues on Appeal.

The Claims Satisfy the Requirements of 35 U.S.C. § 112, second paragraph.

Claims 5-12 and 16-18 were rejected under 35 U.S.C. § 112, second paragraph, the Examiner stating that there is an insufficient antecedent basis for the recitation "the shape of the profile." While Applicants consider a shape inherent in a profile, to advance prosecution, Applicant has amended Claim 5 to recite "a shape of the profile." To advance prosecution, Applicant has also amended Claim 16 to recite "a profile of said cross-sectional surface."

Applicant notes that Claim 12 has been amended to recite that the length of the pressure element is "substantially less than" the narrow face for purposes of consistency. Support for the claim limitations "less than" and "substantially less than" is found in the specification and the drawing. For example, it is clear from the specification that the narrow face is longer than the pressure element. The description (page 9 lines 31-33) of the pressure element as a sliding shoe wherein the "board element with a . . .narrow face. . .runs . . .past the sliding shoe. . ." supports this. It is also particularly evident from the drawing that the length of the pressure element can be "substantially less than" that of the narrow face.

A skilled artisan can reasonably determine the scope of the claims, and thus, the requirements of 35 U.S.C. § 112, second paragraph are satisfied.

The Claims Are Not Anticipated by Duewel

Claims 10-12 and 14-15 were rejected under 35 U.S.C. § 102(b) over Duewel (U.S. Patent No. 4,222,812). Applicant points out that the rejections are moot with respect to the

amended claims.

The claims are directed to methods for gluing a covering (e.g. a bandlike covering) onto a workpiece (narrow face of a board element or a surface of a profile bar) with adhesive, wherein the covering is pressed onto the surface of the workpiece (e.g. the narrow face of the board element or surface of the profile bar) by means of at least one pressure element wherein the covering is pressed on by means of a pressure element which has ***an elastically deformable pressure face that deformably matches and exerts uniform pressure independent of the shape*** of the profile of the workpiece (narrow face of the board element or the surface of the profile bar), wherein movement of the board element or profile bar along its length, in relation to the pressure element, occurs while the covering is uniformly pressed onto the narrow face.

As the Office Action acknowledges on page 2, paragraph 4, **the spindle of Duewel would not deformably match and exert uniform pressure independent of the shape of the profile**. A straight surface and flat edge, are clearly required and would preclude the use of many profiles, for example rounded or bullnose type profiles. Therefore, Claims 10 and 14, and claims dependent thereon are clearly distinguished from Duewel.

The Claims are Not Anticipated by LaMers

Claim 16 was rejected under 35 U.S.C. § 102(b) over LaMers (U.S. Patent No. 4,547,252). Applicant points out that the rejection is moot by amendment.

The claim is directed to methods for gluing a covering onto a workpiece with an adhesive. The covering is pressed onto the workpiece by means of at least one pressure element which has an elastically deformable pressure face that deformably matches and exerts uniform pressure on the cross sectional surface independent of the profile of said cross sectional surface, ***wherein movement of the workpiece along its length, in relation to the pressure element, occurs while the covering is uniformly pressed onto the cross sectional surface***.

The Office Action states that LaMers teaches the latter limitation – that the workpiece is moved along its length, in relation to the pressure element, while the covering is uniformly pressed onto the cross-sectional surface. Specifically, the Office Action points to the last sentence of the abstract and to column 3, lines 60-63 as support for this limitation. The first

of these cited portions states that "the bellows is then extended at said second location beyond the separation station to thrust the label against an article conveyed therepast." This statement must be taken in the proper context. It is clear when viewing LaMers *as a whole* that the workpiece is not, and could not, be moving relative to the pressure head while the covering is uniformly pressed onto the cross sectional surface. For example, LaMers states:

> A plunger apparatus 70 which is disposed near the V-shaped groove 24 of the separator plate, serves to engage each label before, during, and after its separation from the carrier strip, and to carry that label against an article A, so that the adhesive-bearing face of the label is pressed against the article. The articles are carried on a conveyor apparatus C past the labeling machine, *and movement of the plunger 70 is timed so that a label is applied to each article passing thereby.* As illustrated in FIG. 7, the plunger apparatus 70 includes a plunger or bellows supporting plate 72 and a bellows 74 with an inner portion 76 fixed to the plunger supporting plate and an outer end face 78.

LaMers, column 3, lines 55-67. The skilled artisan would clearly appreciate that the workpiece is not moving relative to the bellows while the two are in contact – this is evident as ***timing*** is required to allow the extension of the bellows to contact the article at the appropriate moment.

Furthermore, as the specification states at column 10, lines 18-21, and as is shown in Figure 27, "the bellows when extended against an object, as shown in Fig.26 [sic], wraps itself partially around the object, insuring proper label placement." Because LaMers teaches that the bellows surrounds the object, movement of one relative to the other is not possible along the length of the workpiece.

Even if the relative movement were theoretically possible, it would be contrary to the express teachings of LaMers, which seeks to avoid any such movement. LaMers generally teaches a ***reciprocating*** plunger or bellows for applying labels to articles as they pass on a conveyer. The bellows must be carefully timed (see above) to allow the label to be carried to and applied to the article. The bellows also must reciprocate in connection with the required timing, not only to allow the label to be applied to the article, but also to provide for proper lateral alignment of the bellows via the internal member 85. See column 5, lines 8-19. Such proper positioning of the bellows is required for accuracy in placing the labels on the articles. Thus, rather than teaching uniform contact of the pressure head with the workpiece and relative movement therebetween along the length of the workpiece as the label is applied, LaMers teaches that the contact of the bellows with the article must be timed, and that "it is

also necessary to raise the forward end of the plate 72 which holds the bellows 74 during rearward motion of the bellows. This is to *prevent the bellows from rubbing on the label strip* during such rearward motion." Column 6, lines 57-61. The skilled artisan would thus understand that such sliding contact is to be avoided for proper application of a label in connection with LaMers' invention to avoid the "hinging" problem discussed at column 7, line 19-25.

Further, LaMers does not teach any need for uniform contact whatsoever. In fact, LaMers expressly teaches that it is not necessary for contact to occur at all between the bellows and the article to be labeled. At column 4, lines 50-54 LaMers states "The pressured air tends to reject the label from the face 78 of the bellows, ***but it does not matter if the label flies off the bellows even as it is moving towards the article*** if the distance of the article is not great. The pressured air rejection of the label helps in preventing the label from sticking to the bellows as the bellows contracts and draws away from the article." This is inconsistent with the requirement in the present claims **of exerting uniform pressure while uniformly pressing the covering onto the cross sectional surface**.

Further, contrary to the Office Action, LaMers does not teach an elastically deformable pressure face that deformably matches and exerts uniform pressure on the cross sectional surface independent of the profile of said cross sectional surface. The plunger or bellows of LaMers cannot be said to be elastically deformable or to exert *uniform* pressure on the surface because the ***bellows face*** contains a necessary recess in the face, forming a check valve which is *not elastically deformable*. Column 4, lines 63-67 ("The bellows is molded of elastomeric material, with a recess 81 in the bellows face, and with three slits cut into the recessed portion to form the hole 90. The recess forms three flaps 83 which can *readily bend inwardly but not outwardly*.")

The slits are ***required*** to allow the bellows to pick up and retain the label, and to reject the label for application to the article. Such a structure could not exert *uniform* pressure and LaMers simply does not expressly teach uniform pressure. In view of the structural requirements and the acceptability of the label flying off the bellows onto the article (see above) the skilled artisan would not understand LaMers as teaching uniform pressure.

LaMers fails to teach the uniform sliding contact of the bellows with the workpiece, as contrasted with the claims of the instant invention. Moreover, LaMers apparently

considered and rejected this, to arrive at an apparatus that avoids such contact to minimize the "hinging" problem as articles are conveyed past the reciprocating bellows. Thus, LaMers does not teach the elastically deformable face which can apply uniform pressure while the workpiece is moving relative to the pressure head required for the instant claims.

For all the foregoing reasons, LaMers does not teach each and every step of the instant method and therefore does not anticipate it.

The Claims Are Not Anticipated by Mathis

Claim 14 was rejected under 35 U.S.C. § 102(b) over Mathis (U.S. Patent No. 4,658,721). The rejection is moot by amendment.

The claim is directed to methods for uniformly adhering a bandlike covering onto a workpiece such as a narrow face of a board element. The methods comprise providing a pressure element that includes an elastically deformable pressure face capable of deformably matching and exerting uniform pressure on the narrow face independent of its shape; and moving the pressure element or the board element relative to the other along the length of the board element while uniformly pressing the covering onto the narrow face or surface with the pressure element. The methods result in uniformly adhering the covering onto the workpiece (e.g. the narrow face of the board element or the surface of a profile bar).

Mathis is generally directed to a dry printing process via hot foil embossing. The Office Action states that Mathis teaches all the limitations of the claimed invention. Contrary to its own assertion, the Office Action itself acknowledges on page 11, paragraph 19, that Mathis is silent as to moving the board element along its length in relation to the embossing dye, while the foil is pressed onto the narrow face. The Office Action asserts that the embodiments depicted in Figures 1-4 show the embossing die being moved with respect to the workpiece during the pressing step. Applicants respectfully assert that Figures 1-4 do not in any way teach the required limitation of moving the pressure element or the board element relative to the other ***along the length of the board element while uniformly pressing*** the covering onto the narrow face or surface with the pressure element.

Figures 1 and 3 merely show, for a cylindrical and flat workpiece respectively, the relative positions of the components prior to printing. The only movement possibly evident from Figures 2 and 4 is the progressive engagement of the die with the workpiece, leading up

to the pressing or printing step. There is no teaching in Mathis that there is any movement of the die or the workpiece after the engagement is completed. There is also no teaching that the pressing is uniform, nor is there any teaching of movement along the length of the workpiece at any time. Moreover, the abstract of Mathis states:

> In a procedure for dry printing of a workpiece through application of a hot embossing foil 5 and embossing die 8 as well as with application of heat, pressure, and time, workpiece 1 and embossing die 8 are moved relatively up to each other, *held in contact with intermediate clamping* of hot embossing foil 5, and heat thereby transferred.

Thus, it is evident that Mathis cannot teach the limitations of the instant method. Because Mathis teaches a printing process, it is not possible to move the workpiece relative to the embossing die while uniformly pressing the foil on the workpiece. Rather, as Mathis describes at column 3, lines 48-52, "the embossing die, through progressive engagement over the entire die surface, is brought into contact with the workpiece, and the embossing die, at least in the region of the die surface, is thereby given a form corresponding to the shape of the workpiece." Thus, although the die is brought into contact with the workpiece through relative movement (progressive engagement) of the die and workpiece, once this pressing (printing) step begins, there can be no movement of the workpiece relative to the embossing die until after the clamping time has elapsed. See column 8, lines 23-27 wherein Mathis states:

> If the necessary heat has been applied and the dwell time has elapsed, embossing die 8 is first removed from workpiece 1 and supporting mask 6, whereby supporting mask 6 further retains hot embossing foil 5 on workpiece 1 without slip.
>
> After expiry of the necessary cooling time, supporting mask 6 is also swiveled back into its position of rest evident from FIG. 1, whereby hot embossing foil 5 or its carrier strip is detached from printed image 2, which is now fixed on surface 3 of workpiece 1. Hot embossing foil 5 is moved onwards one effective space, and a new object 1 can be subjected to the printing process.

The Office Action cites column 3, lines 59-61 to establish that movement relative to each other occurs, however this language clearly refers to movement "**up to each other.**" Once the die and workpiece are "up to each other," the clamping period begins and there is no further movement, particularly along the length of the workpiece until such time as the die is removed by reversing the process by which it came in contact with the workpiece. Rather the sample must remain until it is cooled and the excess foil can be removed. Any movement other than removal of the die would cause heating outside the area to be printed and would result in unwanted impressions (see column 5, lines 36-38 and below). In any case, any

relative movement between the die and the workpiece prior to the completion of the progressive engagement is only movement around the workpiece and not movement along the length of the workpiece. Such movement would plainly destroy the integrity of the printed image.

Further evidence that such movement would not be compatible with the foil printing process of Mathis is provided at column 5, lines 8-38 regarding the required use of the supporting mask:

> Especially during printing of uneven surfaces or workpieces, the hot embossing foil is initially applied to the surface of the workpiece to be printed with application of a supporting mask and thereby fixed. Finally, the embossing die is applied to the already fixed hot embossing foil through an opening in the supporting mask. After transfer of heat from the embossing die to the hot embossing foil and the surface of the workpiece, the embossing die initially and, after a cooling time, the supporting mask are lifted off the workpiece. Application of the supporting mask is always appropriate or generally even necessary if the workpiece surface to be printed is convex or concave. ***Only on simple evenly produced workpieces can the supporting mask ever be missing.*** The major advantage of supporting mask application is that this initially at once applies the hot embossing foil to the surface of the workpiece to be printed and fixes it there. The supporting mask exhibits an opening or window through which the embossing die with its die element and especially die surface directly engages the hot embossing foil, whereas the other parts of the embossing die are able to engage the supporting mask. Through supporting mask design, the unrolling process and application of the supporting surface to the hot embossing foil can be additionally influenced. *The supporting mask, however, also serves for prevention of heat transfer from the other parts of the embossing die--other than at the location of its opening or window.* ***The embossing foil may not be heated outside the printed image, since additional unwanted impressions would here otherwise occur on the workpiece.***

It is also evident from Mathis that movement along the length of the workpiece while in contact with the embossing die would be problematic as it requires that the supporting mask has a specific window for allowing contact between the die, foil and workpiece. The process is solely intended to operate in a "stroke-like manner" (see column 4 lines 32-35) and not with continuous movement down the length of the workpiece. Further, such movement would interfere with proper cooling of the printed image:

> Through application of the supporting mask, it is further possible to exploit the advantage that, before, during, and after the embossing process, the hot embossing foil can be held relative to the surface of the workpiece to be printed without slip. This allows assurance of a specific cooling time after removal of the embossing die from the surface to be printed. The printed image becomes cleaner and clearer.

Mathis, Column 5, lines 39-46.

In accordance with the foregoing, it is clear that Mathis does not teach each and every limitation of Claim 14.

The Claims are Not Obvious Over the Cited References

As a preliminary matter, only art which is analogous may be used to assess the obviousness of the subject matter at issue. MPEP 2141.01(a). A reference is deemed "reasonably pertinent" even though it is from a field afar from that of the inventor's endeavor, if it is one which, because of its subject, logically would have commended itself to an inventor's attention in considering his problem. *Id.* Here, the use of a bandlike web of labels for placing on individual objects or articles would not be considered pertinent by the skilled artisan seeking, for example, to apply the continuous bandlike covering of the instant claims to a board element to achieve a high quality surface. The art cited is not concerned with the application of any continuous bandlike covering, nor is it concerned with the high-quality surface (e.g. uniform pressing), rather it is at most concerned with accurate placement and avoidance of gross wrinkles. Nor would the reciprocating or stroke-like manner of operation, although quite appropriate for attaching labels on objects or articles, be at all pertinent to the skilled artisan seeking to apply a continuous bandlike covering to a lengthy workpiece to achieve a high quality surface. The art cited throughout the 35 U.S.C. § 103(a) rejections is simply all nonanalagous to methods of applying edgebanding and the like as set forth in the instant claims.

Claim 17 was rejected under 35 U.S.C. § 103(a) over LaMers in view of Hodgson (U.S. Patent No: 4,132,583). Even if the art were analogous, LaMers does not teach that ***movement of the workpiece along its length, in relation to the pressure element, occurs while the covering is uniformly pressed onto the cross sectional surface,*** as is required to practice the method of the present claims (as discussed above). LaMers also does not teach the elastically deformable face which can apply uniform pressure while the workpiece is moving relative to the pressure head. Nothing in Hodgson provides the missing claim elements or steps. It is moot whether Hodgson teaches the label being bandlike. Furthermore, neither LaMers nor Hodgson contemplates a continuous process of applying pressure and moving the workpiece to which the bandlike material is applied. Nor would there be any motivation to combine them because they each solve the same problem in and of themselves: Hodgson teaches a reciprocable applicator (column 2, line 34) for accurately placing labels on objects, and LaMers teaches a plunger capable of expanding and contracting to reliably apply labels to goods. Both also seek to eliminate photoelectric or

electromechanical label sensing devices. There is no teaching or suggestion in the references themselves to motivate the skilled artisan to modify the reciprocating, or stroke-like methods taught therein to arrive at the steps of the methods claimed here – in particular there is no teaching of ***movement of the workpiece along its length, in relation to the pressure element, while the covering is uniformly pressed onto the cross sectional surface.***

Accordingly, the cited references, singly or in combination, do not teach each and every element of the claimed invention.

Claims 5, 8-12, 14-15, and 18 were rejected under 35 U.S.C. § 103(a) over LaMers in view of Hodgsdon, further in view of Treat (U.S. Patent No: 4,726, 865). For all of the reasons stated above, neither LaMers nor Hodgson, nor any combination thereof, teach the limitations of the independent Claims 5, 10, and 14. The Office Action also states that LaMers is not limited to a particular shape or size workpiece. In view of the teaching in LaMers of a frustoconical bellows that surrounds the workpiece, the skilled artisan would not consider LaMers useful for workpieces which are substantially longer, or even merely longer than the pressure face or bellows face. Treat provides nothing that remedies the deficiencies of LaMers and Hodgson.

The cited references, singly or in combination, do not teach each and every element of the claimed invention.

Claim 6 was rejected under 35 U.S.C. § 103(a) over LaMers in view of Hodgsdon, further in view of Treat, and further in view of Schut *et al.* (U.S. Patent No.: 6,376,058). For all of the reasons stated above, neither LaMers, Hodgson, nor Treat, nor any combination thereof, teach the limitations of the Claim 5. Claim 5 is the independent claim from which Claim 6 depends. The Office Action states that Schut *et al.* provides holt melt adhesive of Claim 6. However, Schut *et al.* does not provide the limitations missing from the combination of Treat with LaMers and Hodgson, and thus the references individually or in combination do not teach each and every element of the claimed method.

Claim 7 was rejected under 35 U.S.C. § 103(a) over LaMers in view of Hodgsdon, further in view of Treat as discussed above, and further in view of Paulk *et al.* (U.S. Patent No.: 6,529,799). For all of the reasons stated above, neither LaMers, Hodgson, nor Treat, nor any combination thereof, teach the limitations of the independent Claim 5 from which Claim 7 depends. The Office Action states that Paulk *et al.* teaches the chipboard, fiber board and

solid board of Claim 7. However, Paulk *et al.* does not provide the limitations missing from the combination of Treat with LaMers and Hodgson, and thus the references individually or in combination do not teach each and every element of the claimed method.

Claims 5-12 and 15-18 are rejected under 35 U.S.C. § 103(a) over Mathis (U.S. Patent No. 4,658,721). As a preliminary matter, as with the above rejections under 35 U.S.C. § 103(a), Applicant respectfully asserts that Mathis is nonanalagous art. A skilled artisan desiring to solve the problem of adhering a bandlike covering onto a board element to achieve a high quality surface would not consider a hot foil embossing process as pertinent. There is no logical connection between Mathis and the considerations the skilled artisan would have in addressing the problem here. Printing processes of the embossing type in particular are inherently discontinuous and would be not be associated with the type of uniform pressing and simultaneous relative movement down the length of the board element that must be considered here. It is clear from a proper reading of Mathis on its face that there can be no movement down the length of the workpiece during the contact, without creating an unclear printed image. Further, there is no logical connection between the use of a embossing die and the instant claims. Contact with an embossing die would not be considered as uniform, or even potentially so, because it is the differences in contact which generate a proper image – the use of a *die* inherently and logically requires that there be areas with greater and lesser contact. Mathis in fact teaches that the die surface is uneven, even if covered by a thin elastomeric material. See e.g. column 7, lines 47-50 stating that "On its side facing towards workpiece 1, die element 10 exhibits *a die surface 11 in which the locations arranged to project* determine the lining or design of printed image 2." Such art would not be considered logically connected by the skilled artisan seeking to solve the problem here.

Even if the art were considered analogous, for all the reasons stated above with respect to the rejection of Claim 14 under 35 U.S.C. § 102 over Mathis, Mathis does not teach several of the required limitations. In particular Mathis does not teach or suggest movement of the workpiece down its length during the uniform pressing step. As described above, notwithstanding Mathis' teaching that the die "consists of elastically deformable material" which , on the gross scale engages the surface on an elastically deformable manner, i.e. it assumes a form generally "corresponding to the shape of the workpiece," Mathis does

not teach or suggest uniform contact with the sample as a die would not be expected to result in *uniform* contact as discussed above.

The Examiner is invited to contact the Applicant's undersigned representative if she has any questions.

Respectfully submitted,

Date: July 1, 2005

Brian J. Hubbard
Registration No. 45,873

Woodcock Washburn LLP
One Liberty Place - 46th Floor
Philadelphia PA 19103
Telephone: (215) 568-3100
Facsimile: (215) 568-3439